

DIRECT TESTIMONY

OF

GENE G. SOULT

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2004-002-E

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH
SOUTH CAROLINA ELECTRIC & GAS COMPANY (SCE&G).**

A. Gene G. Soutl, 111 Research Drive, Columbia, South Carolina. I am employed by
South Carolina Electric & Gas Company as General Manager of Fossil and Hydro
Operations Services.

**Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS
EXPERIENCE.**

A. I have a B. A. S. in Management from Troy State University of Troy, Alabama and a
Masters in Business Administration from Webster University. SCE&G employed me in
June 1981, as a Control Room Foreman at V.C. Summer Nuclear Station. In October
1981, I became a Shift Supervisor at V.C. Summer Nuclear Station and continued to
progress through the V.C. Summer management chain to ultimately become the General
Manager, Nuclear Plant Operations in 1991. In 1992, I assumed the position of General
Manager, Quality for SCE&G. In 1993, I became Manager, Cope Generating Station
and maintained that position through construction, startup and initial commercial
operation. In June 1997, I became General Manager, Technical Services in the
Fossil/Hydro Division of SCE&G. Most recently, in January 2000, I assumed my
current position of General Manager, Fossil & Hydro Operations. In this position, I
report to the Vice President of Fossil & Hydro Operations.

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2 A. The purpose of my testimony is to review the operating performance of South Carolina
3 Electric & Gas Company's fossil units and GENCO's Williams Station during the
4 period March 1, 2003, through February 29, 2004. I will also briefly discuss the
5 purchase of natural gas for use in our combustion and combined cycle turbines.

6 Q. PLEASE GIVE A SHORT DESCRIPTION OF SCE&G'S FOSSIL AND HYDRO
7 ELECTRIC FACILITIES.

8 A. SCE&G owns and/or operates eighteen (18) fossil fuel (coal and gas) generating plants
9 and six (6) hydroelectric generating plants. The total net summer generating capability
10 rating of these facilities is 4,236 megawatts.

11 Q. PLEASE EXPLAIN TO THE COMMISSION SOUTH CAROLINA
12 GENERATING COMPANY ("GENCO") AND ITS RELATIONSHIP TO
13 SCE&G.

14 A. South Carolina Generating Company, Inc., ("GENCO") was incorporated October 1,
15 1984, as a SCANA subsidiary. GENCO owns the Williams Electric Generating Station.
16 GENCO sells to SCE&G the entire capacity and output from the Williams Station under
17 a Unit Power Sales Agreement approved by the Federal Energy Regulatory
18 Commission. Hereafter when I refer to SCE&G's fossil steam plants I include GENCO.

19 Q. HOW MUCH ELECTRICITY WAS GENERATED BY SCE&G IN THE
20 TWELVE MONTH REVIEW PERIOD?

21 A. In the review period, SCE&G generated 23,100,100 megawatt hours of energy. Of this
22 energy, our fossil steam plants generated 70%, gas peaking turbines and hydro facilities
23 generated 9 % and our nuclear plant generated 21%. Exhibit ____ (GGS-1) provides a
24 graphic display of how our generation met this review period's energy demand.

25 Q. PLEASE SUMMARIZE THE PERFORMANCE OF THE FOSSIL UNITS.

1 A. Overall, SCE&G's fossil units have operated efficiently and dependably in the twelve-
2 month period of March 1, 2003 through February 29, 2004.

3 Our fossil units have operated better than the North American Electric Reliability
4 Council ("NERC") national 5 year (1998-2002) average for forced outage rates and
5 with reasonable heat rates. These measures will be covered later in my testimony.

6 Q. PLEASE DISCUSS SCE&G'S PLANNED OUTAGES FOR THE PERIOD UNDER
7 REVIEW.

8 A. Outages were scheduled and completed at Wateree units #1 and 2, McMeekin #1 and 2,
9 and Williams. The Wateree outages (Unit 1 in the Spring of 2003 and Unit 2 in the Fall
10 of 2003) were scheduled to complete the installation of selective catalytic reactors
11 (SCRs) to reduce NOx emissions required by the Clean Air Act and the Environmental
12 Protection Agency's (EPA) State Implementation Plan (commonly referred to as SIP
13 Call). New air heaters and economizer ash systems were also installed during this time.
14 Additionally some major boiler tubing replacement in the reheat and arch tube sections
15 and a turbine overhaul were conducted on Unit 1. The McMeekin units were scheduled
16 off in the fall of 2003 to complete phase 1 of the tie in of new cooling water piping as
17 part of the construction of the new backup Saluda Dam. McMeekin Unit 1 Low
18 Pressure Turbine inspection was also performed. Williams Station was scheduled off
19 during the spring of 2003 to modify the economizer and install new ID fans in
20 preparation for the installation of an SCR in 2004. Williams Station also re-tubed their
21 main condenser, and replaced several boiler tube sections.

22 Q. WHAT HAS BEEN SCE&G'S SYSTEM FORCED OUTAGE RATE FOR THE
23 PERIOD UNDER REVIEW?

24 A. SCE&G experienced a system forced outage rate of 2.04% in the review period.
25 "Forced outage rate" is the percentage of the total hours that generating units are forced

1 out of service (for various reasons) compared with the total hours in service for a
2 period. The North American Electric Reliability Council ("NERC") national 5 year
3 (1998-2002) average for forced outage rate for similarly sized units is 5.07 %.

4 **Q. PLEASE DISCUSS THE AVAILABILITY OF SCE&G'S FOSSIL PLANTS**
5 **DURING THE REVIEW PERIOD.**

6 A. SCE&G had an availability of its fossil plants of 84.19% for the review period.
7 Availability is a measure of the actual hours that the generation units are available
8 (overall readiness to provide electricity) divided by the total hours in the 12-month
9 review period. Availability is not affected by how the unit is dispatched or by the
10 demand from the system when connected to the grid. However, it is impacted by the
11 planned and maintenance shutdown hours.³ The North American Electric Reliability
12 Council ("NERC") national 5 year (1998-2002) average for availability from similar
13 sized pulverized coal fired units was 86.71%. SCE&G's availability was slightly lower
14 than the NERC national 5-year average due to the timing and duration of the normal
15 planned and maintenance shutdown hours associated with equipment maintenance
16 outages and environmental compliance investments. However, during the peak period,
17 June 1, 2003 thru September 30, 2003, SCE&G operated at an availability of 94.5%.

18 **Q. WHAT HAS BEEN THE HEAT RATE OF THE FOSSIL UNITS DURING THE**
19 **REVIEW PERIOD?**

20 A. Heat rate is a way to measure thermal efficiency of a power plant fuel cycle. It is the
21 number of BTU's of fuel required to generate one (1) kilowatt-hour of electricity.
22 The combined steam units heat rate for the period March 1, 2003 through February 29,
23 2004 is 9655 Btu/kWh. Cope Station had the best heat rate in our system at 9281
24 Btu/kWh followed by McMeekin Station at 9398 Btu/kWh. In the November 2003
25 issue of *Electric Light & Power*, SCE&G was recognized by having two of its plants
26 listed in the top 20 most energy efficient coal fired plants in the nation for 2002. Cope

1 Station ranked 10th at 9415 Btu/kWh and Williams Station ranked 18th at 9602
2 Btu/kWh. In that issue, Cope was listed as the 8th best in the nation in the list of the top
3 20 cleanest coal-fired power plants ranked by SO2 emission rates. Also, in this issue,
4 Cope Station ranked 19th in capacity factor at 89.8%.

5 **Q. HOW IS NATURAL GAS PROCURED FOR THE COMBUSTION AND**
6 **COMBINED CYCLE TURBINES?**

7 A. SCE&G contracts with South Carolina Pipeline Corporation (SCPC) to procure natural
8 gas for our combustion turbine generators in accordance with SCPC's standard
9 interruptible contract. SCE&G also contracts with SCPC for 50,000 DTH of firm
10 natural gas per day for use in our Urquhart Combined Cycle Units. This is a contract
11 that was previously approved by the Commission. Gas amounts above the firm rate are
12 supplied through the standard interruptible contract supplied by SCPC.
13 SCE&G will shortly finalize an agreement with SCANA Energy Marketing, Inc (SEMI)
14 to supply 120,000 DTH of firm gas for our new Jasper Facility. Mr. Steve Cunningham
15 will discuss this agreement.

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. Yes.

**South Carolina Electric & Gas
2003 Generation Mix**

